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# IRON AND STEEL MILLS

## CENSUS OF MANUFACTURES

1967



ONTARIO STATISTICAL CENTRE  
ECONOMIC AND STATISTICAL SERVICES DIVISION  
DEPARTMENT OF TREASURY AND ECONOMICS

Hon. Charles S. MacNaughton,  
Treasurer of Ontario and Minister of Economics

H. Ian Macdonald,  
Deputy Minister



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## SYMBOLS

- \* Confidential
- S Suppressed to protect confidential items
- Nil or Zero
- Amount too small to be expressed
- .. Figures not available
- ... Figures not appropriate or not applicable
- ( ) Figures within brackets are negative

## NOTES

1. Figures may not add to the total because of rounding.
2. To ensure confidentiality, confidential items are either combined with other items or suppressed.
3. If an item is combined with other items, this is indicated by brackets or by footnotes.
4. Where a confidential item cannot be meaningfully combined with other items, the confidential item is suppressed by placing an asterisk instead of the actual figure, and the confidential item lumped with "All others".

## INTRODUCTION

This report is one of a series designed to provide information on industries and products covered in the 1966 and 1967 Census of Manufactures. The collection of manufacturing data by the Ontario Statistical Centre is carried out under a statistical arrangement negotiated with the Dominion Bureau of Statistics in accordance with the provisions of the Federal and Provincial Statistics Acts.

The use of the same questionnaire as the Dominion Bureau of Statistics provides for comparability of national and provincial manufacturing statistics. In a few cases, there may be slight variances between the statistics published by the Ontario Statistical Centre and the Dominion Bureau of Statistics. These are mainly due to different interpretations in editing and may also be the result of estimating outstanding questionnaires. As new information becomes available, the statistics may be revised.

The classification of establishments included in this report is based upon the definitions embodied in the Dominion Bureau of Statistics Standard Industrial Classification. "Concepts and Definitions" notes prepared by the Dominion Bureau of Statistics for the Census of Manufactures are included in this report.

All correspondence concerning this report should be directed to the Ontario Statistical Centre.

There are four main types of establishments classified to the Iron and Steel Mills Industry:

- 1) Establishments primarily engaged in manufacturing pig iron and ferro-alloys.
- 2) Steel works primarily engaged in manufacturing ingots and steel castings and in the continuous casting of steel.
- 3) Rolling mills primarily engaged in hot and cold rolling of steel into primary shapes.
- 4) Coke ovens operated in connection with blast furnaces.

In some cases, the blast furnace, steel mill, rolling mill and coke oven or some combination of two or more of them are carried on as one integrated operation and the manufacturing processes may be carried on beyond the rolling mill stage.

In 1967, the value of manufacturing shipments by the Iron and Steel Mills Industry in Ontario was \$1,010 million, a decrease of 1 per cent over 1966. Ontario's shipments represented 82 per cent of the total Canadian shipments. Average production employment in manufacturing operations showed a decrease of 3 per cent from 1966. Value added by manufacture amounted to \$529 million, a decrease of 3 per cent from 1966. Value added for total activity also decreased by 3 per cent.

TABLE 1  
PRINCIPAL STATISTICS, ONTARIO AND CANADA, 1965 TO 1967

Year	Establishments	Manufacturing Activities					Total Activities				
		Production and related workers		Cost of fuel and electricity	Cost of materials and supplies	Value of shipments of goods of own manufacture	Value <sup>1</sup> added	Working owners and partners		Employees	
		Number	Man-hours paid					Number	With-drawals	Number	Salaries and wages
		'000	'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Ontario											
1965	16	28,155	59,083	173,672	36,843	448,168	1,012,278	550,103	-	34,044	217,800
1966	16	29,300	61,321	187,043	38,702	443,087	1,017,974	543,043	-	35,312	235,858
1967	17	28,402	58,854	190,537	39,589	444,789	1,010,297	528,872	-	34,597	244,307
Canada <sup>2</sup>	41	36,434	77,202	221,232	47,703	565,741	1,231,765	646,100	-	44,274	277,126
1965	43	37,984	80,205	236,645	49,497	569,019	1,255,392	648,228	-	45,999	299,552
1966	44	36,078	75,572	236,890	50,700	565,034	1,228,999	617,093	-	44,203	305,300
1967 <sup>3</sup>	39	79	78	80	78	79	82	86	-	78	80
Ontario/Canada ratio (%) 1967											86

<sup>1</sup> "Value Added by Manufacture" is computed from value of shipments plus the net change in inventories of finished goods and goods in process, less cost of materials, fuel and electricity.

<sup>2</sup> As published by DBS.

<sup>3</sup> Preliminary figures.

TABLE 2

## FUEL AND ELECTRICITY USED IN MANUFACTURING ACTIVITY, ONTARIO, 1966 AND 1967

Description	Unit	1966		1967	
		Quantity	Cost \$'000	Quantity	Cost \$'000
1. Large establishments reporting commodity detail:					
Bituminous coal	Ton	196,735	2,096	141,909	1,543
(a) From Canadian mines	"	-	-	-	-
(b) Imported	"	4,862	66	799	10
Sub-bituminous coal (from Alberta mines only)	"	-	-	-	-
Anthracite coal	"	7,141	108	4,863	38
Lignite coal	"	911,969	257	901,615	239
Coke	Imp. gal.	163,704,273	14,544	158,310,245	14,316
Gasoline	Cord	-	-	-	-
Fuel oil including kerosene or coal oil	Imp. gal.	89,241	17	46,466	10
Wood	M.Cu.ft.	12,034,865	5,742	12,678,969	6,734
Gas:	Kwh. Pound	2,648,303,608	15,870	2,634,440,622	16,615
(a) Liquefied petroleum gases	...	...	...	...	85
(b) Other manufactured gas					
(c) Natural gas					
Other fuel					
Electricity purchased					
Steam purchased					
2. Small establishments not reporting commodity detail:					
Estimate for fuel and electricity					
3. All establishments:					
TOTAL FUEL AND ELECTRICITY USED		38,702	...	39,589	

TABLE 3

## MATERIALS AND SUPPLIES USED, ONTARIO, 1966 AND 1967

	Description	Unit	1966		1967	
			Quantity	Cost \$'000	Quantity	Cost \$'000
A.	MANUFACTURING ACTIVITY					
1.	Materials used:					
	<u>Coke, gas and by-products section</u>					
	Bituminous coal carbonized in ovens or retorts	ton	4,706,551	52,471 351	4,804,012 ...	54,983 331
	Other materials used		...			
	<u>Sinter plant and blast furnace section</u>					
	Crude iron ore, Canadian and imported	"	2,184,352	22,808	1,650,785	16,910
	Iron ore (sintered, pelletized, etc.) Canadian and imported	"	7,820,985	98,747	7,773,996	101,765
	Mill cinder, scale, flue dust, etc. (not sintered, pelletized, etc.):					
	Purchased	"	6,025	77	9,157	75
	Own make	"	319,155	...	256,880	...
	<u>Scrap iron and steel:</u>					
	Purchased	"	99,464	1,007	155,216	1,034
	Own make	"	41,363	...	18,528	...
	<u>Limestone and dolomite</u>					
	Coke:	"	1,145,443	1,925	1,136,955	1,947
	Purchased	"	283,860	6,938	139,465	3,275
	Own make	"	3,305,814	...	3,323,058	...
	<u>Firebrick, fireclay and other refractories</u>					
			...	630	...	1,379

**Table 3** - Materials and Supplies Used, Ontario, 1966 and 1967 - continued

Description	Unit	1966		1967	
		Quantity	Cost \$'000	Quantity	Cost \$'000
<u>Steel ingots and steel castings section</u>					
Scrap iron and steel:					
Purchased	ton	1,246,726	39,539	1,233,300	37,717
Own make	"	2,620,368	...	2,629,969	...
Ferromanganese: high, medium and low carbon	"	53,136	9,422	48,861	8,210
Ferrosilicon: high, medium and low silicon grade	"	16,740	2,856	13,419	2,391
Ferrochrome: high and low carbon	"	9,824	3,002	10,720	3,198
Other ferro-alloys	"	...	5,247	...	5,865
Iron ore, crude, calcined, roasted or treated	"	211,910	3,312	167,855	2,612
Chrome and tungsten ore	"	335	393	238	402
Aluminum, copper, nickel ingots, shot, etc.	"	7,314	7,307	6,711	7,088
Other metals	"	...	327	...	566
Bentonite, dolomite and magnesite	"	212,362	3,019	207,988	3,044
Fluorspar and graphite	"	27,106	1,031	24,153	986
Electrodes	"	...	2,279	...	2,096
Firebrick, fireclay and other refractories	"	...	15,261	...	17,724
Ingot moulds (including hot tops) and stools	"	...	13,551	...	14,671
Other materials used	"	...	6,500	...	6,069
<u>Rolled steel products section</u>					
Steel ingots:	"	32,697	1,329	115,944	7,791
Purchased	"	8,337,000	...	8,216,105	...
Own make	"	121,497	19,781	145,127	21,104

**Table 3** - Materials and Supplies Used, Ontario, 1966 and 1967 - continued

Description	Unit	1966		1967	
		Quantity	\$'000	Quantity	\$'000
Acids: chromic, hydrochloric and sulphuric					
Rolls (and dies)		...	1,127	...	1,201
All other materials used		...	9,207	...	8,688
All other raw materials and components used but not included in individual sections above		...	24,307	...	22,289
2. Containers and other packaging materials and supplies used		...	14,694	...	13,878
3. Operating, maintenance and repair supplies used		...	5,389	...	5,191
4. Amount paid out to others for work done on materials owned by establishments		...	64,003	...	64,865
TOTAL		...	5,251	...	5,443
			<u>443,087</u>	...	<u>444,789</u>
B. NON-MANUFACTURING ACTIVITY					
1. Purchases of goods for resale in same conditions as purchased		...	5,942	...	7,461
2. All other materials and supplies used		...	2,483	...	2,730
TOTAL		...	<u>8,424</u>	...	<u>10,192</u>
C. TOTAL INPUT OF MANUFACTURING AND NON-MANUFACTURING ACTIVITIES		...	<u>451,511</u>	...	<u>454,981</u>

TABLE 4

## SHIPMENTS OF GOODS, ONTARIO, 1966 AND 1967

Description	Unit	1966		1967		\$'000
		Quantity made, including amounts for own use	Quantity shipped	Value of shipments	Quantity made, including amounts for own use	
A. MANUFACTURING ACTIVITY						
1. Products shipped:						
Coke, gas and by-products	...	...	9,620	...	...	10,678
Steel ingots and steel castings	...	...	40,915	...	...	41,820
Rolled steel products:						
Hot-rolled products:						
Rails, wire rods, structural shapes and bars	net tons	1,814,661	1,646,328	231,271	1,720,404	1,591,482
Plates, sheets and strip, and other hot-rolled forms	" "	...	2,328,274	302,124	...	2,283,088
Cold-rolled and coated products:						
Bars, sheets, strip, plates, etc.	" "	3,151,640	2,067,187 106,889	363,493 17,416 * 1	3,042,448 52,714	2,027,753 111,679 * 1
Other rolled steel products	" "	...	...	...	...	...
Ferro-alloys						
All other products						
2. Amount received in payment for work done on materials and products owned by others						
3. LESS adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above						
4. TOTAL ADJUSTED VALUE OF SHIPMENTS AND WORK DONE				-1,559	...	-1,240
				1,017,974	...	1,010,297
B. NON-MANUFACTURING ACTIVITY						
1. Shipments of goods purchased and sold in same condition as purchased				8,294	...	8,511
2. Other revenues				6,348	...	6,798
TOTAL				14,642	...	15,309
C. TOTAL OUTPUT OF MANUFACTURING AND NON-MANUFACTURING ACTIVITIES				1,032,616	...	1,025,606

<sup>1</sup> Confidential, included in "All other products".

**TABLE 5**  
EMPLOYMENT AND PAYROLL, ONTARIO, 1966 AND 1967

Employees	1966				1967			
	Male	Female	Total	Salaries and wages	Male	Female	Total	Salaries and wages
	Number			\$'000	Number			\$'000
Production and related workers								
Manufacturing	S	*	29,301	187,043	S	*	28,402	190,537
Others	*	*	518	3,979	*	*	535	4,426
Administrative and office	4,215	975	5,190	42,346	4,334	938	5,272	46,329
Sales and distribution	220	83	303	2,490	276	112	388	3,015
TOTAL EMPLOYEES	34,045	1,267	35,312	235,858	33,352	1,245	34,597	244,307

**TABLE 6**  
MONTHLY PRODUCTION EMPLOYEES IN MANUFACTURING ACTIVITY, ONTARIO, 1966 AND 1967

Month	1966			1967		
	Male <sup>1</sup>	Female <sup>1</sup>	Total	Male <sup>1</sup>	Female <sup>1</sup>	Total
Establishments reporting monthly detail (large establishments only):	Number					
January			28,185			27,377
February			28,300			27,892
March			28,408			28,115
April			28,619			28,471
May			29,501			29,273
June			30,162			29,479
July			30,670			29,727
August			30,583			29,508
September			30,509			28,269
October			29,517			27,881
November			28,966			27,566
December			28,188			27,262
Averages			29,301			28,402
Small establishments reporting annual averages			-			-
AVERAGE FOR ALL ESTABLISHMENTS			29,301			28,402

<sup>1</sup> The monthly breakdown of employment by sex is not shown as female employment figures are confidential.

TABLE 7

## CALCULATION OF INPUT, OUTPUT AND VALUE ADDED, ONTARIO, 1966 AND 1967

Description	1966		1967		\$'000	Total
	Manufacturing activity	Non manufacturing activity	Total	Manufacturing activity		
<b>OUTPUT</b>						
1 Shipment and other revenue Inventories - Goods of own manufacture:	1,017,974	14,642	1,032,616	1,010,297	15,309	1,025,606
Add closing	54,995	...	54,995	58,183	...	58,183
- Finished goods	48,908	...	48,908	48,762	...	48,762
Deduct opening	55,411	...	55,411	55,027	...	55,027
- Finished goods	41,635	...	41,635	48,964	...	48,964
2 Net inventory change	6,857	...	6,857	2,954	...	2,954
3 Gross output (1+2)	1,024,831	14,642	1,039,473	1,013,250	15,309	1,028,560
<b>INPUT</b>						
4 Purchases of goods not of own manufacture Inventories - Goods not of own manufacture:	...	5,942	5,942	...	7,461	7,461
Add opening	445	536	445	...	536	536
Deduct closing	...	536	536	...	272	272
5 Cost of goods sold (not of own manufacture)	...	5,851	5,851	...	7,725	7,725
6 Materials, supplies, etc.	443,087	2,483	445,569	444,789	2,730	447,520
7 Fuel and electricity	38,702	-	38,702	39,589	-	39,589
8 Gross input (5+6+7)	481,788	8,333	490,122	484,379	10,455	494,834
9 VALUE ADDED (3-8)	543,043	6,308	549,351	528,872	4,854	533,726

**TABLE 8**  
INVENTORIES, ONTARIO, 1966 AND 1967

Inventories	1966		1967	
	Opening	Closing	Opening	Closing
book value \$'000				
1 Manufacturing				
Materials, supplies, etc.	109,131	110,491	110,718	111,685
Goods in process	55,411	54,995	55,027	58,183
Finished goods of own manufacture	41,635	48,908	48,964	48,762
TOTALS	206,176	214,394	214,709	218,630
2 Non-manufacturing				
Products or materials purchased for resale	445	536	536	272
3 TOTAL INVENTORIES	206,621	214,930	215,245	218,902

NOTE: Opening inventories may differ from the closing inventories of the previous year because of changes in classification, the receipt of revised data, the inclusion of new establishments and the removal of establishments which did not operate during the survey year.

**TABLE 9**  
MAN-HOURS, MANUFACTURING ACTIVITY, ONTARIO, 1966 AND 1967

Man-Hours	1966	1967
	Number	
Total man-hours worked in all manufacturing operations	56,944,182	54,541,677
Total man-hours not worked, but nevertheless paid (e.g. paid vacation, sick leave, statutory holidays, etc.)	4,376,790	4,312,202
TOTAL MAN-HOURS PAID	61,320,972	58,853,879

IRON AND STEEL MILLS



LIST OF ESTABLISHMENTS, ONTARIO, 1967

(Does not include establishments classified to other industries, which as a secondary activity, manufacture products typical of this industry)

Establishment	Location
Algoma Steel Corporation Limited (Canadian Furnace Division)	Port Colborne
Algoma Steel Corporation Limited (Steel Works Division)	Sault Ste Marie
Atlas Steel Company (Division of Rio Algom Mines Ltd.)	Welland
Canada Electric Castings Ltd.	177 Silvercreek Parkway, Guelph
Dominion Foundries & Steel Limited	Box 460, Hamilton
Fahr alloy Canada Limited	95 Barrie Road, Orillia
Indiana Steel Products Co. of Canada Ltd., The	529 Manitou Drive, Kitchener
Lake Ontario Steel Co. Ltd.	Hopkins St. S., Whitby
Masterloy Products Ltd.	P.O. Box 105, Gloucester
Neelon Steel Limited	R.R. #1, Foundry Road, Sudbury
Slater Steel Industries Ltd., (Burlington Steel Co. Division)	Box 271, Hamilton
Stanley Steel Co. Ltd.	57 Gerrard Street, Hamilton
Steel Co. of Canada Ltd., The	Wilcox Street, Hamilton
Steel Co. of Canada Ltd., The (The Canadian Drawn Steel Co. Ltd.)	Wilcox Street, Hamilton
Union Carbide Canada Ltd.	Welland
Union Drawn Steel Co. Ltd.	Burlington St. East, Hamilton
Welmet Industries Ltd.	Box 370, Welland



## CONCEPTS AND DEFINITIONS

### ESTABLISHMENT

A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. The majority of such establishments are firms but many firms have more than one establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements embodied in the following definition of the "establishment":

"The smallest unit which is a separate operating entity capable of reporting the following principal statistics:

- Materials and supplies used
- Goods purchased for resale as such
- Fuel and power consumed
- Number of employees and salaries and wages
- Man-hours worked and paid
- Inventories
- Shipments or sales."

Each establishment is required to report on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on the different activities (manufacturing, trading in goods not of own manufacture, construction by own labour force, revenue from services, etc.) are requested to be reported separately. It should be noted that the statistics for separate activities are not completely consistent since some respondents cannot distinguish, in their records, materials, shipments and inventories relating solely to their own manufacturing activities. For example, inventory of goods purchased for re-sale may not be distinguishable from inventory of own manufactured goods. Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level and for studies or statistical measures requiring accurate coordinated data, the "total" statistics should be used.

The number of establishments represents the number of operating units that are principally engaged in the activities of the manufacturing industries to which they have been classified. These units do not necessarily represent the total number engaged in the production of a commodity mainly produced in a certain industry. Some commodities are produced as secondary products in other manufacturing and non-manufacturing industries. It should be noted that head offices and auxiliary units which are surveyed separately are not included in the establishment count, (see following notes on head offices and auxiliary units).

### HEAD OFFICES AND AUXILIARY UNITS

All head offices and auxiliary units of companies classified to the manufacturing industries such as sales offices, administrative offices, warehouses, laboratories, etc. are now surveyed as part of the Census of Manufactures.

These head offices and auxiliary units are either included in an establishment report or are surveyed by means of the head office questionnaire. The former is the most common case where a single establishment firm has its executive personnel, sales office, etc. located at the site of the manufacturing plant (establishment). The special head office questionnaire is generally used where a firm, regardless of the number of establishments, has separately located offices or auxiliary units. Such offices or units do not constitute establishments within the Census of Manufactures as they do not normally generate operational revenues, but give rise only to costs of operations (mainly salaries and wages) which are automatically included in the value of shipments or sales. Although not considered as establishments, and hence, not included in the "establishment" count for an industry, the operational costs are reflected in either the "Industry" statistics (3 or 4 digit level) or the "Major group" statistics (2 digit level) according to the following rules:

(a) In the case of single establishment firms, statistics for separately located offices and units are classified to the same industry (3 or 4 digit) as the establishment;

(b) In the case of multi-establishment firms, the statistics for such offices and units are coded to the same industry as the establishments of the firm, when all establishments are in the same industry (3 or 4 digit). When establishments of such firms are coded (1) to different industries within a major group (2) to industries in different major groups or (3) to industries in different divisions of the Standard Industrial Classification, then the statistics are included in the major group totals (2 digit level) in which the major part of the company's operations are classified. Although this may result in some distortion of major group statistics in the case of (2) and (3) the statistics at the industry (3 or 4 digit) level in all cases will be left free of these company-wide data.

## EMPLOYEES

### (a) Production and related workers - Manufacturing activities

In addition to those engaged in production and assembling activities, production and related workers in manufacturing activities include those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees engaged in maintenance, repair, janitorial and watchman services and line supervisors (working foremen) engaged in similar work to that of the employees they supervise. For those establishments reporting on the "long" form, production and related workers engaged in manufacturing activity are reported as those receiving pay during the last pay period of each month, an average for the year being obtained by summing the monthly figures and dividing by 12. This procedure is followed even though the establishment did not operate in all months in order to arrive at equivalent annual full-time employment. The numbers are somewhat affected by turnover, in that employment is overstated when an employee changes employment during a pay period. In the case of the establishments reporting on the "short" form, respondents are requested to report average annual figures. The man-hours of production and related workers in manufacturing activity represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays, etc.) Data on a man-hours are not collected from establishments reporting on the short form. Man-hours for these establishments are estimated. In reporting overtime hours, respondents are requested to report only hours actually at work.

(b) Production and related workers - Non-manufacturing activities

Such employees include those on manufacturing establishments' payrolls engaged in activities such as construction undertaken for the use of these establishments, some outside piece-workers employed in certain industries, logging employees who are reported as part of a sawmilling establishment and any other production workers who are not engaged in manufacturing-type operations.

(c) Administrative and office employees

This category includes all executive and supervisory officials such as presidents, vice-presidents, comptrollers, secretaries, treasurers, etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the line supervisor or working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical, etc. It should be noted that prior to 1961 this category also included working owners and partners. Also included in this category are employees located at head offices or auxiliary units separately located from the establishment; these are generally included in the figures for the province in which they are located according to the rules outlined under "Head offices and auxiliary units" above.

(d) Sales and distribution workers

This category includes office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truckdrivers and their helpers, etc. It may also include some sales employees who are reported as part of a manufacturing establishment but are not working at the establishment's location. These are generally broken down by province in cases where more than 15 employees are involved in any one province. The figures exclude persons working on a commission basis who are not considered regular employees of the establishment.

(e) Total employees

This total comprises the foregoing categories including employees located at separately located head offices and auxiliary units. The numbers of employees included under categories (b), (c) and (d) are reported in the form of annual averages and represent as closely as possible full time employment; adjustments are made when reported figures indicate the existence of part time or seasonal employment. In all the above categories, figures on employment refer to the calendar year whether or not other establishment statistics can only be reported on a fiscal year other than the calendar year.

WORKING OWNERS OR PARTNERS

These are not now included in the statistics of employees and salaries and wages. There is some duplication in numbers when a person owns more than one establishment and is reported as a working owner on each Census return. Withdrawals of working owners are defined as amounts withdrawn by owners or partners for normal living expenses excluding withdrawals for payment of income tax.

SALARIES AND WAGES

Salaries and wages refer to gross earnings of employees before deductions for income tax and employees contributions to social services such as sickness,

accident and unemployment insurance, pensions, etc. They include all salaries, wages, bonuses, profits shared with employees, the value of room and board where provided, commissions (paid to regular employees only) as well as any other allowance forming part of the worker's earnings. Payments for overtime are included. Figures on salaries and wages refer to the calendar year.

## FUEL AND ELECTRICITY

Figures for fuel refer to amounts actually used (including fuel used in cars, trucks, locomotives, etc.), not to purchases unless the quantities are substantially the same. Any fuel and electricity produced by establishments for internal consumption are not included in the total cost. Values represent laid down cost at the establishment including freight, duty, etc. Although fuel and electricity used is considered part of manufacturing activity it should be noted that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

## MATERIALS AND SUPPLIES

### (a) Manufacturing activities

Figures represent quantities and laid down cost values, at the establishment, of materials, supplies and purchased components owned and used during the year in manufacturing activities and related processes. These statistics represent only commodity items of physical goods (cost of services or overhead charges such as advertising, insurance, depreciation, etc. are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Included are maintenance and repair supplies not chargeable to fixed assets accounts and any amounts charged by other establishments for work done on materials owned by the reporting establishment. Cost of repairs or maintenance done by outside contractors and cost of returnable containers are not included.

### (b) Non-manufacturing activities

#### 1. Purchases for re-sale as such

Figures represent cost of materials or products purchased from others by the reporting establishment (or received as transfers from other establishments of the reporting company) for re-sale as such in the same condition as purchased. Included are any finished products received on consignment from other countries.

#### 2. Other materials and supplies used

Figures represent the cost of materials and supplies, if any, used in new construction and in the production of machinery and equipment (for the use of the reporting establishment) by the establishment's own employees. Included are materials used for any capital repairs and alterations carried out by the establishment's employees. Amounts paid to outside contractors for construction and repair work are not included nor is the cost of purchased machinery and equipment. Also included is the cost of office supplies not chargeable to fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment-operated cafeterias and lunch counters, first aid and medical supplies, laboratory supplies, etc.

## SHIPMENTS

### (a) General

The figures represent revenue from all production, sales, services and related activities of reporting establishments with shipments valued in Canadian dollars at the point at which the establishment relinquishes control. The unsold portion at year end of consignment shipments in Canada is treated as inventory and not as shipments but all shipments to foreign countries for which the form B13 "Customs Canada Export Entry" has been completed, are treated as shipments.

In those industries where work on principal products extends over a relatively long period, (Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair Industry) the value of production rather than the value of shipments is recorded. There are certain establishments in other industries which also operate on a basis of progress payments. For these establishments, shipments are also adjusted to work put in place on the basis of net change in progress payments over the year.

### (b) Shipments of goods of own manufacture

These figures represent shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishments for work done. Included are revenue from repair and custom work, amounts received in payment for work done on materials owned by other establishments and the cost (book value) of any goods shipped on a rental basis.

All products and by-products of own manufacture shipped from the establishment are covered, including transfer shipments to sales outlets, distributing warehouses or to other manufacturing plants of the reporting firm, when such units are treated as separate establishments. The value of shipments are net of returned goods, discounts, returns, allowances, sales tax and excise taxes and duties, returnable containers and charges for outward transportation by common or contract carriers. Transportation or delivery expense incurred by the reporting establishment's own carriers are included.

Shipments of goods of own manufacture of establishments which are coded to some other division of the Standard Industrial Classification (on the basis of principal activity) but which are engaged in manufacturing as a subsidiary activity are collected by means of the Commodity questionnaire. Such shipments together with shipments of goods of own manufacture of establishments forming the universe of manufacturing industries are compiled and recorded in the various industry publications.

### (c) Shipments of goods not of own manufacture

These figures represent the net selling value at establishment (net of discounts, returns, allowances, sales taxes and excise duties and taxes and transportation charges by common or contract carriers) of all products or materials (including products transferred from other establishments of the reporting firm) sold as such in the same condition as purchased or received as transfers. For those industries which ship such goods on a rental basis, the value of shipments represents the book value of these goods. All sales of consignment goods from other countries are included.

(d) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs, alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishment's own employees and for which depreciation accounts are maintained. Included also are any revenues from the sale of electricity and from any operations performed by the establishment's own employees, such as revenue from goods produced or purchased for rental (the book of value of such goods are included as part of shipments of goods of own manufacture or shipments of goods not of own manufacture), servicing revenues, commissions on sales (when not included in value of sales), revenue for company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishment's own products, sale of used materials (excluding sale of used fixed assets) research and development work, etc. As mentioned previously the figures do not include non-operating revenue such as rent, dividends, interest, etc.

INVENTORIES

(a) Manufacturing activities

Values represent the book values of manufacturing inventory owned in Canada. Inventories held for which progress payments have been received are not included. Where progress payments accounts are maintained, the change in these accounts is treated as a net adjustment to shipments. Figures consist of inventory owned at the plant and at warehouses or selling outlets which are treated as extensions of establishments for the purpose of reporting shipments. Inventory owned in transit in Canada or on consignment in Canada is included. Goods shipped abroad and held in inventory are included in shipments. Opening inventories may differ from the closing inventories of the previous year because of changes in classification, the receipt of revised data, the inclusion of new establishments and the removal of establishments which did not operate during the survey year.

(b) Non-manufacturing activities

Figures represent the book value of inventory of goods purchased for resale as such without further processing, owned by the reporting establishments and held at plants and at any warehouses or selling outlets which are treated as extensions of establishments. Other characteristics are the same as in (a) above.

VALUE ADDED

(a) By manufacturing activities

Figures are compiled by deducting the cost of manufacturing materials, supplies, etc. and fuel and electricity consumed from the (value of shipments of goods of own manufacture adjusted for changes in the value of inventories of finished goods and goods in process).

(b) By non-manufacturing activities

The figures are compiled by deducting the cost of goods purchased for resale (adjusted for changes in the value of inventories of goods purchased for resale) and the cost of non-manufacturing materials and supplies used from the value of shipments of goods not of own manufacture, plus other revenue.

(c) By total activities

The figures consist of value added by manufacturing activities plus value added by non-manufacturing activities. This total value added figure may, in some cases, be less than value added by manufacturing activities as a result of expenditures associated with non-manufacturing exceeding revenues from such activities or because of a decrease in inventory of goods not of own manufacture exceeding the mark-up on the sale of such goods. "Value added" is sometimes referred to as net output or net production.



## PUBLICATIONS

This publication is prepared annually by the Ontario Statistical Centre of the Economic and Statistical Services Division, Department of Treasury and Economics. In addition to this report, annual statistics are published on other manufacturing industries. Publications listed below can be obtained from the Ontario Statistical Centre, Queen's Park, Toronto, Canada.

Catalogue Number	Industry Title
5-1430	Distilleries
5-1470	Wineries
5-1510	Leaf Tobacco Processors
5-1530	Tobacco Products Manufacturers
5-2720	Asphalt Roofing Manufacturers
5-2920	Steel Pipe and Tube Mills
5-3230	Motor Vehicle Manufacturers
5-3651	Petroleum Refining Industry
5-3652	Manufacturers of Lubricating Oils and Greases

